

REMARKS

Claims 1 and 3-13 are all the claims pending in the application.

I. Objections to Drawings

The drawings are objected to by the Examiner for the following reasons:

- a) The Examiner objects to the drawings under 37 C.F.R. § 1.83(a) as allegedly failing to show every feature of the invention specified in the claims, specifically with respect to claim 12.
- b) The Examiner asserts that FIGS. 1A and 1B should be designated as prior art.
- c) The Examiner objects to the drawings under 37 C.F.R. § 1.84(p)(5) because they do not include the reference signs 31a, 4, 32, 35e and 13f mentioned in the description.
- d) The Examiner objects to the drawings under 37 C.F.R. § 1.84p(5) because they include the reference signs 31, 4c, 22c, 1e, 35, 2, 10, 104b, 121b, 122b, 121c, 101e, 103e, 121e, 101f, 1105a', 1101a', 134f' and 66 not mentioned in the description.

Applicant respectfully submits that at least FIG. 21 of the drawings shows every feature of the invention specified in claim 12. For example, claim 12 recites an acoustic apparatus comprising acoustic elements. FIG. 21 illustrates a cellular phone 51 (i.e. acoustic apparatus) comprising acoustic element 39.

FIGS. 1A and 1B are amended to include a designation as prior art.

The specification is amended to address the Examiner's objections under 37 C.F.R. § 1.84p(5).

II. Objections to the Specification

The abstract of the disclosure is objected to for not being of proper language and format. The Abstract is amended to address the Examiner's objection.

The disclosure is objected to due to informalities. Specifically, the Examiner asserts that the reference numeral 33d', in paragraph 107 of the publication of this application, is intended to be 133d', and that the reference numeral 65a, in paragraph 124 of the publication of this application, is intended to be 65. The specification is amended to address these informalities.

III. Claim Rejections under 35 U.S.C. § 102

Claims 1-3, 6-8, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Chang (U.S. Patent No. 6,359,370). Claims 1-4, 7, 8, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fuji et al. (U.S. Publication No. 2002/0149296; hereinafter “Fuji”). Claims 1, 3, 6, 8 and 10-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ogura et al. (U.S. Patent No. 6,453,050; hereinafter “Ogura”).

Claim 1 is amended and recites a piezo-electric actuator comprising, *inter alia*, a constraint member for constraining a piezo-electric element, and a supporting member disposed around the constraint member, but not below the constraint member, and a plurality of beam members each having both ends that are fixed to the constraint member and the supporting member, respectively, wherein said beam members are straight beams.

The Examiner asserts that Chang’s base plate 102 discloses the claimed supporting member. Chang discloses that base plate 102 supports the cruciform base 104 (the alleged constraint member), and that the base plate 102 may take any shape so long as the cruciform base 104 is supported along its underside (col. 4, lines 1-9). Clearly, Chang necessitates the base plate disposed below the cruciform base 104. In contrast, claim 1 recites the supporting member disposed around but not below the constraint member.

The Examiner asserts that Fuji's head main body 31 discloses the claimed supporting member. However, Fuji's head main body 31 is disposed below the second piezoelectric thin film 3 (the alleged constraint member) (FIG. 16). In contrast, claim 1 recites the supporting member disposed around but not below the constraint member.

The Examiner asserts that Ogura's dampers 5a-5h and 16a-16d disclose the claimed beam members. However, Ogura further discloses that these dampers are "butterfly dampers" due to the shape thereof. Ogura fails to disclose the dampers being straight beams as claimed.

Neither Chang, Fuji nor Ogura teach or suggest all of the claimed features recited in claim 1. Accordingly, Applicant respectfully submits that claim 1 is patentable over the applied references. Applicant further submits that claims 2-4, 6-8 and 10-13 are patentable at least by virtue of their dependency on claim 1.

IV. Claim Rejections under 35 U.S.C. § 103

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang, Fuji, or Ogura in view of Sasaki et al. (U.S. Patent No. 6,067,965; hereinafter "Sasaki"). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang, Fuji, or Ogura in view of Toki (U.S. Patent No. 5,856,956).

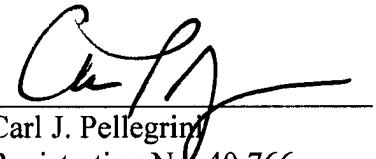
Neither Sasaki nor Toki address the above mentioned deficiencies of Chang, Fuji and Ogura. Accordingly, Applicant respectfully submits that claims 5 and 9 are patentable at least by virtue of their dependency on claim 1.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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